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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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09/879,745

06/12/2001

Barry K. Speronello

6496

7590

09/26/2006

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EXAMINER

NGUYEN, NGOC YEN M

ART UNIT

PAPER NUMBER

1754

DATE MAILED: 09/26/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

09/879,745

Applicant(s)

SPERONELLO ET AL.

Examiner

Ngoc-Yen M. Nguyen

Art Unit

1754

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 24 August 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-5, 7, 9-16 and 18-26 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-5, 7, 15, 16 and 18-24 is/are rejected.
- 7) ☒ Claim(s) 9-14, 25-26 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                       | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

### **DETAILED ACTION**

A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on August 24, 2006 has been entered.

Claims 9-14, 25 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Claim 26 would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. 112, 2nd paragraph, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims.

The following is a statement of reasons for the indication of allowable subject matter: the prior art does not teach or suggest a composition for generating chlorine dioxide, which includes clays or metakolin microspheres. For claim 9-10, during the impregnating step of the zeolite with an aqueous solution in Klatte, if the zeolite had the same pH as required in the instant claims, than in the presence of water (in the aqueous

chlorite solution), chlorine dioxide would have been formed. Thus, zeolite in Klatte must not have the required pH.

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claim 23-24, 26 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In claim 23, the limitation of "comprising a deliquescent salt" appears to broaden the "consisting" language of the claim. It is suggested that the "dry solid hydrophilic material" in line 4 of claim be changed to "dry solid *inorganic* hydrophilic material". Also, it is unclear if the dry solid hydrophilic material be required (1) to satisfy both "comprising a deliquescent salt" and "selected from the group consisting of...", i.e., any solid hydrophilic material must be selected from the Markush group *and* be a deliquescent salt; or (2) at least one dry solid hydrophilic material be a deliquescent salt and at least another be selected from the Markush group, i.e., at least 2 dry solid hydrophilic materials are required.

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

Art Unit: 1754

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-5, 7, 20-21 are rejected under 35 U.S.C. 102(b) as being anticipated by Taylor (2,071,091).

Taylor '091 discloses compositions comprise dry mixtures of chlorites, sodium chlorite or calcium chlorite for example, and an acid agent or acid salt such as boric acid, sodium or potassium acid phosphates, and acid sulphates, and sodium silico fluoride, for example (note page 1, lines 43-48). This fairly teaches, with sufficient specificity, a composition containing a dry chlorite (sodium chlorite or potassium chlorite) and dry boric acid or a composition containing a dry chlorite and an acidic salt such as acid phosphates or sulphates.

The boric acid as disclosed in Taylor '091 would inherently have a pH of "no more than about 10.5" for a 30 weight percent mixture of the boric acid in deionized water, just as the boric acid used in the claimed invention (note instant specification, page 8, lines 9. For the salts, since they are *acidic* salts, they would have a pH of lower than about 10.5 for a 30% weight percent mixture of such salts in deionized water.

For the Dry Air and Humid Air tests, since the compositions as disclosed in Taylor '091 have all the positive components as required in the claimed composition, they would inherently pass both the Dry Air and Humid Air tests.

In the Example 1, the composition contains 2 parts of the metal chlorite to 98 parts of the acid agent, or about 0.02 weight %, this value is well within the claimed range.

For the limitation "for generating chlorine dioxide... 0.001 to 1,000 ppm", it is considered as an intended use limitation and it is not a limitation to be considered in the question of patentability, *In re Hack* 114 USPQ 162. It is well settled that terms merely setting forth intended use for, or a properly inherent in, an otherwise old composition do not differentiate the claimed composition from those disclosed in the prior art. *In re Pearson* 181 USPQ 641. Also, it is contrary to spirit and patent laws that patents be granted for old compositions of matter based on new uses of compositions where uses consists merely in employment of compositions; patentee is entitled to every use of which invention is susceptible, whether such use be known or unknown to him. *In re Thrau*, 57 USPQ 324.

The compositions of Taylor '091 anticipate the claimed ranges.

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-5, 7, 15-16, 18-24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Taylor '091 in view of Aston (2,482,891).

Taylor '091 discloses dry compositions as mentioned in the above rejection.

Art Unit: 1754

For other values beside the one disclosed in Example 1, it would have been obvious to one of ordinary skill in the art to optimize the ratio between the dry chlorite and the dry acid agent in order to obtain the best results.

The difference is Taylor '091 does not disclose the presence of desiccant in the compositions.

Aston '891 discloses a composition in which in contact with water evolves chlorine dioxide. The composition is valuable for use in the bleaching of a variety of organic materials and especially cellulosic materials (note column 1, lines 1-6). The composition is a solid mixture in which the active ingredients are a salt of chlorous acid and a solid organic acid anhydride. It is rendered stable through the inclusion of a desiccant and it may also contain inert diluent materials. Each of the components of the composition is most preferably present in finely powdered form (note column 1, lines 7-14). The solid organic acid anhydride is a "solid acid" as required in the instant claims.

As disclosed in Example II, a mixture of 25 parts of powdered sodium chlorite, 33 parts of powdered phthalic anhydride and 3 parts of anhydrous calcium chloride gave a stable composition containing 50.2% of available chlorine. The composition liberated chlorine dioxide when added to water (note column 3, lines 38-43). The presence of calcium chloride as a desiccant is not excluded by the presence claims because it is considered as a hydrophilic "salt". It should be noted that presence of a desiccant is required in the instant claims 17, 22, 24. In the event that the presence of a desiccant is excluded by the instant claims, Aston '891 discloses that the presence of a desiccant is

Art Unit: 1754

to provide a stable solid mixture, thus, it can be deleted along with its attendant function, In re Wilson, 153 USPQ 740 (CCPA 1967).

Aston '891 can be further applied to teach the ratio of metal chlorite to dry solid hydrophilic material. The amount of calcium chloride in the above Example is 3 parts per  $(25+33+3=)$  61 parts or about 4.9%. This value is well within the claimed range. The weight ratio of the metal chlorite to the dry solid hydrophilic material is 25:33 or 0.75:1

The chlorite can be alkali or alkaline earth metal chlorite (note claim 1).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to include a desiccant in the compositions of Taylor '091, as suggested by Aston '891 because the desiccant prevents premature reaction between the chlorite and the acid agent in the event that the chlorite contains small amount of water.

Applicant's arguments with respect to claims 1-5, 7, 15-16, 18-24 have been considered but are moot in view of the new ground(s) of rejection.

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

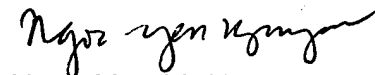


Art Unit: 1754

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ngoc-Yen M. Nguyen whose telephone number is (571) 272-1356. The examiner is currently on Part time schedule.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mr. Stanley Silverman can be reached on (571) 272-1358. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 872-9306 or (571) 273-8300.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed (571) 272-1700.



Ngoc-Yen M. Nguyen  
Primary Examiner  
Art Unit 1754

nmn  
September 18, 2006